

Work Order ID 91242

October-03-12 3:11:37 PM

91242

Page 1

Item ID: DSK134-3

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Swaging test sample -Welded w/o I-beam

Stop ***NS2***

Start Date: 10/03/12 Start Qty: 5.00 ***5***

Cust Item ID:

Required Date: 10/03/12 Req'd Qty: 5.00 ***5***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

110

0.00

110

Skid tubes

Skid tubes

Memo

0.00

1- PICK D2600-1 EXTRUSION AND CUT AS PER DWG

2- DRILL HOLES IN D2600-1 AS PER DWG

3- CHAMFER HOLE AS PER DWG

⑤ 12-10-02

⑤ 12-10-02

⑤ BE12-10-03

120

QC5- Inspect part completeness to step on W/O

0.00

120

QC

Quality Control

Memo

0.00

⑤ 12/10/13

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Training <input type="checkbox"/>																											
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FAULT CATEGORY																											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other																		

Work Order ID 91242

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91242

Page 2

Item ID: DSK134-3 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Swaging test sample -Welded w/o I-beam
 Start Date: 10/03/12 Start Qty: 5.00 ***5*** Cust Item ID:
 Required Date: 10/03/12 Req'd Qty: 5.00 ***5*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Large Fab Large Fab	Weld per dwg A/R Aluminum rod Batch: <u>M122324</u> Memo 1- WELD PER DWG 2- GRIND FLUSH AS PER DWG 3- C'BORE AS PER DWG	0.00 0.00		<u>12-10-3</u> <u>BE12-10-03</u>		<u>5</u>			
140 *140* QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.00							
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00		<u>(5) 9/12/10/3</u>					

SKIN EXTRUSION LENGTH = 3.00 ± 0.30
 C'BORE = $\phi 0.313^{+0.006}_{-0.000}$
 Depth between 0.720 - 0.820 (of c' bore)
 Only one tube has depth out of tolerance.

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

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Page 3

Item ID: DSK134-3 Accept ***N9000040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Swaging test sample -Welded w/o I-beam
Start Date: 10/03/12 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 10/03/12 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Eng Engineering	Memo PERFORM ENGINEERING TEST	0.00 0.00							
170 *170* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
180 *180* Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo	0.00 0.00							

P 12/10/13

P 12/10/13

N/A TEST ONLY
P 12/10/13

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged
<input type="checkbox"/> Crushed/Crimped.	<input type="checkbox"/> Burrs
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio
	<input type="checkbox"/> Grain
	<input type="checkbox"/> Hardware
	<input type="checkbox"/> Inspection Incomplete
	<input type="checkbox"/> Instructions Incomplete/Unclear
	<input type="checkbox"/> Maintenance
	<input type="checkbox"/> Mislabeled
	<input type="checkbox"/> Misread
	<input type="checkbox"/> Offset
	<input type="checkbox"/> Out of Calibration
	<input type="checkbox"/> Out of Sequence
	<input type="checkbox"/> Outside Dimensions
	<input type="checkbox"/> Ovalized
	<input type="checkbox"/> Over/Under tolerance
	<input type="checkbox"/> Part Incorrect
	<input type="checkbox"/> Part Lost/Missing
	<input type="checkbox"/> Part Moved
	<input type="checkbox"/> Positioned Wrong
	<input type="checkbox"/> Power Loss/Surge
	<input type="checkbox"/> Pressure/Forced
	<input type="checkbox"/> Temperature/Cure
	<input type="checkbox"/> Weld
	<input type="checkbox"/> Wrong Stock Pulled
	<input type="checkbox"/> Other

Picklist Print

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Page 1

Work Order ID: 91242

Parent Item: DSK134-3

Start Date: 10/03/12

Required Date: 10/03/12

Parent Item Name: Swaging test sample -Welded w/o I-beam

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A 12.09.11 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1 -196 Extrusion Round 3" 206		Manufactured	No				Each	0.0000		1369622 ⁹		12-10-02	
D2649 Cross Bolt Spacer		Manufactured	No				Each	120.0000		5			

Location

Loc Qty

Loc Code

LG

120

82813

40

85586

4

86912

3

87645

18

88529

15

90333

40

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

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QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Linda Lacelle

From: Isam El-Kassis <ielkassis@dartaero.com>
Sent: September-06-12 3:54 PM
To: 'Linda Lacelle'
Subject: FW: 206 swaging test requirements.

Hi Linda,

Please see below for swaging tubes, please pass it along to Dan.
We should move on this project ASAP,
We'll be having a large order in front of us, therefore we need to prove the swaging operation.

Thank you,

Isam

From: Chris Provencal [<mailto:cprovencal@dartaero.com>]
Sent: Thursday, September 06, 2012 3:48 PM
To: David Duval; Mike Petsche; Isam el Kassis
Subject: RE: 206 swaging test requirements.

The actual swaging should be per the c'bore instruction on D2650, which is 0.313 DIA x 0.75 DP

From: Chris Provencal [<mailto:cprovencal@dartaero.com>]
Sent: Thursday, September 06, 2012 3:42 PM
To: David Duval; Mike Petsche; Isam el Kassis
Subject: 206 swaging test requirements.

David,

Swaging test pieces needed:

- 5 welded x-bolt spacers with I-beam
- 5 welded x-bolt spacers with no I-beam
- 5 swaged x-bolt spacers with I-beam
- 5 swaged x-bolt spacers with no I-beam

3" long skidtube sections each.

Recommend that the x-bolt spacers themselves be cut 3.245" long (if not already cut)

Need to let the swaged skid sections sit for at least a week to see if they develop any cracks before we load test them

-Chris

RD3425

DRAWING NO. D2580	TITLE 205 SKIDTUBE ASSEMBLY	REV. E	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D2580-E-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>JP</i>	CHECKED <i>ASS</i>	MFG. APPR. <i>ER</i>	APPROVED <i>#</i>	DE APPR. <i>#</i>		
DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11.12.13		

PURPOSE:

CHANGE ALL C'BORED WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

WAS

QTY	QTY	QTY	PART NUMBER	DESCRIPTION
-041	-045	-047		
20	24	25	D2579	CROSS BOLT SPACER

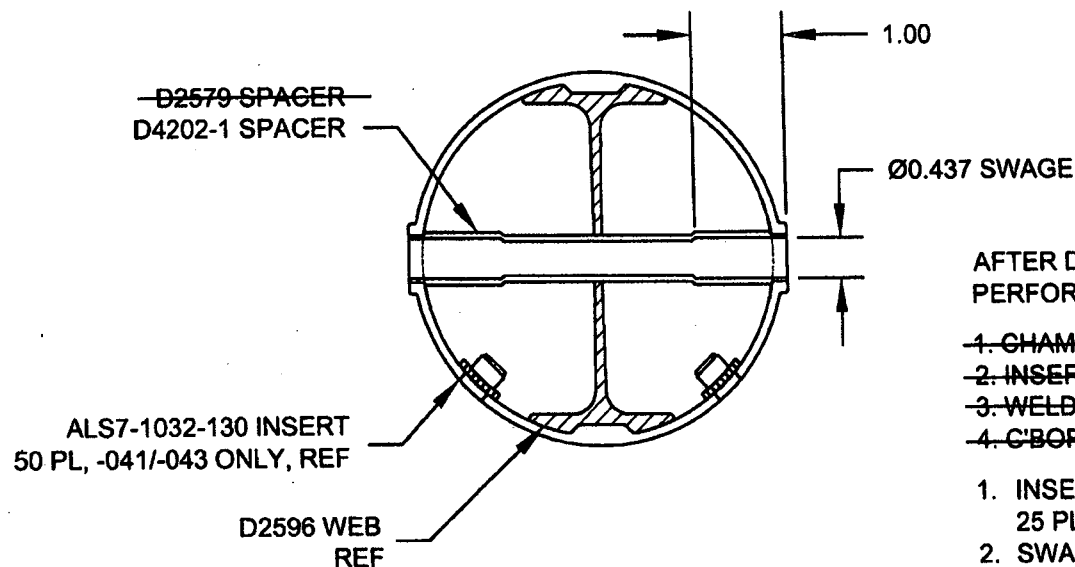
IS

	4		* D2579	CROSS BOLT SPACER
20	20	25	D4202-1	SPACER

SECTION B-B, SECTION F-F, & SECTION I-I ARE AMENDED AS FOLLOWS
FOR ALL HOLES THAT WERE ORIGINALLY C'BORED:

*** FOR -045 SKIDTUBE ONLY:**
WELD 4X D2579 SPACERS PER DWG
IN LOCATIONS MARKED "NO C'BORE".
REF SHEET 4 OF DWG.

RELEASED
2011-12-14



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

- ~~1. CHAMFER HOLE 0.050 X 45°~~
- ~~2. INSERT D2579 SPACER (20 PLACES)~~
- ~~3. WELD INTO PLACE AND GRIND FLUSH~~
- ~~4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP~~

1. INSERT D4202-1 SPACER, 20 PL (-041) OR 20 PL (-045) OR 25 PL (-047)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

SECTION B-B, F-F, I-I
NOT TO SCALE

Material Requisitions

R/S#: _____

Part Number: M 606/T 641.000 w. 125 Batch #: M 122081 Quantity: 6"Received/taken by: Dereck Date: 12/09/10**USED FOR:** (must be completed)

Engineering Project # P _____

OR

Shop Tooling (non-work order) _____

Continues progress skid tube table's

H:\forms\purchase\approved purch\MATREQ revB

Material Requisitions

R/S#: _____

Part Number: D2600-1-190 Batch #: 69622 Quantity: 1Received/taken by: Dan Date: 12/09/10**USED FOR:** (must be completed)

Engineering Project # P _____

OR

Shop Tooling (non-work order) _____

RD 3425

H:\forms\purchase\approved purch\MATREQ revB

Material Requisitions

R/S#: _____

Part Number: D2649 Batch #: 388529 Quantity: 10Received/taken by: BARCLAY Date: 12-09-19**USED FOR:** (must be completed)

Engineering Project # P _____

OR

Shop Tooling (non-work order) RD 3425

David Duval

From: Chris Provencal <cprovencal@dartaero.com>
Sent: Thursday, September 06, 2012 3:48 PM
To: David Duval; Mike Petsche; Isam el Kassis
Subject: RE: 206 swaging test requirements.

The actual swaging should be per the c'bore instruction on D2650, which is 0.313 DIA x 0.75 DP

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Subject: 206 swaging test requirements.

David,

Swaging test pieces needed:

5 welded x-bolt spacers with I-beam
5 welded x-bolt spacers with no I-beam
5 swaged x-bolt spacers with I-beam
5 swaged x-bolt spacers with no I-beam

3 long skid tube sections each

Recommend that the x-bolt spacers themselves be cut 3.245" long (if not already cut)

Need to let the swaged skid sections sit for at least a week to see if they develop any cracks before we load test them

-Chris

$$3.75 - .058 - .058 = 2.59$$

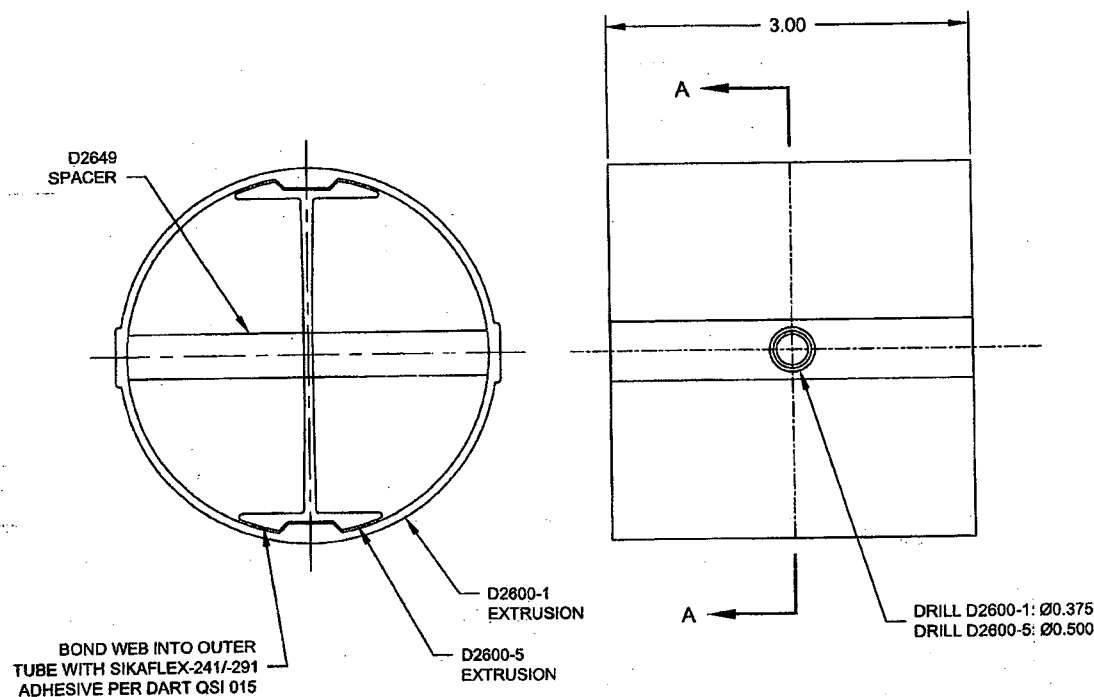
$$2.59 \div 3.13 = 0.83$$

$$100 - 83 = 17\%$$

~~17%~~

Need to expand 17% not good for TG.
Not more than 12%

REFERENCE ONLY

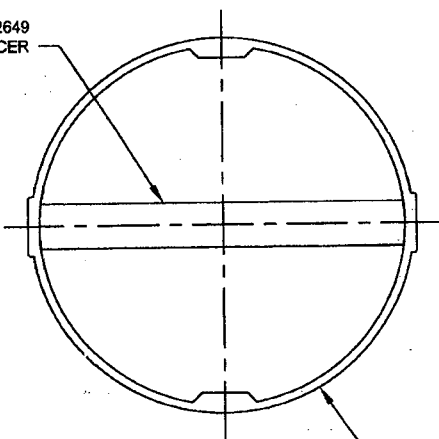


DSK134-1 TEST SAMPLE (WELDED W/ I-BEAM)

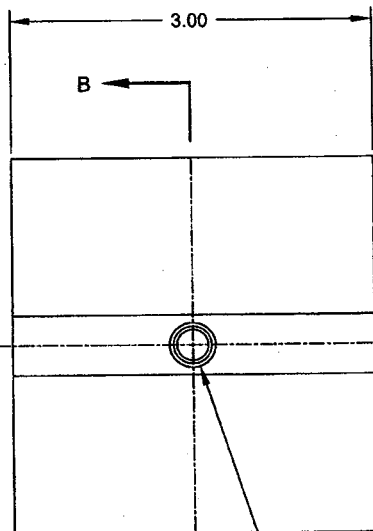
PROTOTYPE
PLEASE RETURN ALL ISSUED
DATA TO ENGINEERING
4-12/9/11

DESIGN	90	DART AEROSPACE LTD	
DRAWN	90	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO:	REV. A
MFG. APPR.		DSK 134	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		SWAGING TEST SAMPLES (206 SKID)	NTS
DATE	12.09.11	<small>COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

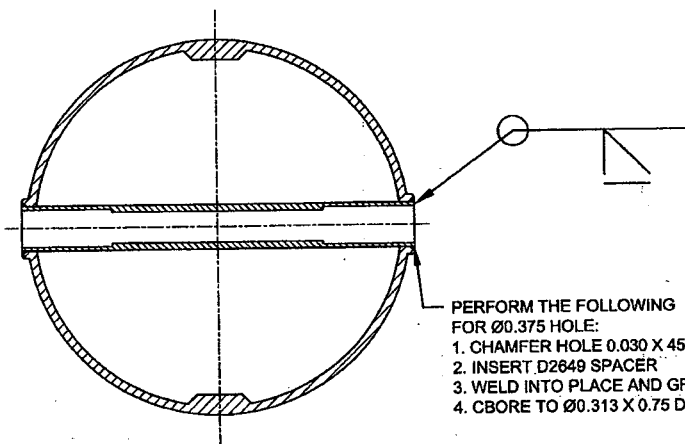
D2649
SPACER



D2600-1
EXTRUSION



DRILL D2600-1: Ø0.375



- PERFORM THE FOLLOWING
FOR Ø0.375 HOLE:
1. CHAMFER HOLE 0.030 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP

SECTION B-B

DSK134-3 TEST SAMPLE (WELDED W/O I-BEAM)

PROTOTYPE
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DATA TO ENGINEERING
12/9/11

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DRAWN	90	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		DSK 134	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		SWAGING TEST SAMPLES (206 SKID)	NTS
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D2649
SPACER,
HT TO T4
CONDITION

BOND WEB INTO OUTER
TUBE WITH SIKAFLEX-241/-291
ADHESIVE PER DART QSI 015

D2600-1
EXTRUSION

D2600-5
EXTRUSION

DRILL D2600-1: Ø0.375
DRILL D2600-5: Ø0.500

- PERFORM THE FOLLOWING
FOR Ø0.375 HOLE:
1. INSERT D2649 SPACER
2. SWAGE TO Ø0.313 X 0.75 DP
PER QSI 002
3. TRIM/GRIND FLUSH PER QSI 002

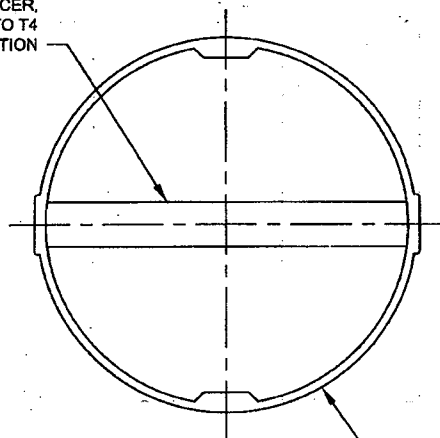
SECTION C-C

DSK134-5 TEST SAMPLE (SWAGED W/ I-BEAM)

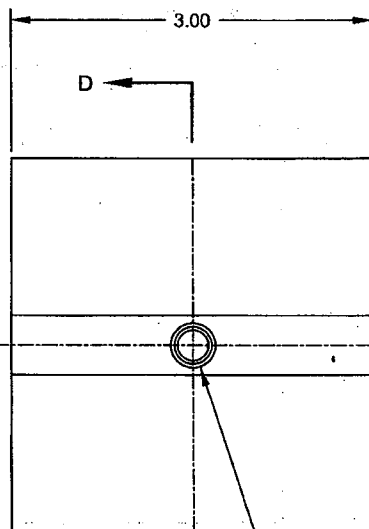
PROTOTYPE
PLEASE RETURN ALL ISSUED
DATA TO ENGINEERING
4/ 12/9/11

DESIGN	92	DART AEROSPACE LTD	
DRAWN	92	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG/ APPR		DSK 134	SHEET 9 OF 4
APPROVED		TITLE	SCALE
DE APPR		SWAGING TEST SAMPLES (206 SKID)	NTS
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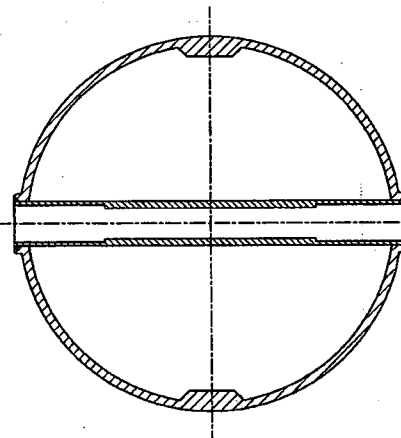
D2649
SPACER,
HT TO T4
CONDITION



D2800-1
EXTRUSION



DRILL D2800-1: Ø0.375



- PERFORM THE FOLLOWING
FOR Ø0.375 HOLE:
1. INSERT D2649 SPACER
 2. SWAGE TO Ø0.313 X 0.75 DP
PER QSI 002
 3. TRIM/GRIND FLUSH PER QSI 002

SECTION D-D

DSK134-7 TEST SAMPLE (SWAGED W/O I-BEAM)

PROTOTYPE
PLEASE RETURN ALL ISSUED
DATA TO ENGINEERING

12/9/11

DESIGN	9	DART AEROSPACE LTD	
DRAWN	9	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		DSK 134	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		SWAGING TEST SAMPLES (208 SKID)	NTS
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